



Analysis of Slot Machine and Proposed Table Gaming Legislation in PA

*With Emphasis of Their Effect on the
Pennsylvania Race Horse Industry*

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Authorized by the Pennsylvania Equine Coalition

Executive Summary

An Analysis of Slot Machine and Proposed Table Gaming Legislation in Pennsylvania with Emphasis on Their Effect on the Pennsylvania Race Horse Industry

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for
The Pennsylvania Equine Coalition

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The Pennsylvania Racehorse Gaming and Development Act (Act 71) of 2004 permitted slot machine gaming at seven racetrack and seven non-racetrack locations. It was designed to provide property tax relief, promote economic development, and to enhance horse racing and breeding. The four funds in the table below, along with the residual retained by the gaming licensee, were set up to satisfy legislative intent.

Gaming Revenue Recipient	Statutory Percent of Gross Terminal Revenue after Promotional Allowances	Percent of Gross Terminal Revenue before Deduction of Promotional Allowances – FY08
State Gaming Fund – Slot Machine Tax	34%	31.0%
State Gaming Fund – Local Share Assessment	4%	3.6%
PA Gaming Economic Development Fund	5%	4.6%
PA Race Horse Development Fund (PRHDF)	12%	10.9%
Retained By Licensee (residual)	45%	49.9%

By design, as new stand-alone Category 2 and 3 casinos come on-line, the percent of revenue paid by each licensee to the Pennsylvania Race Horse Development Fund (PRHDF) will fall below the effective 2008 contribution of 10.9%.

As in other racino states, provisions were made to guarantee live racing. The PRHDF was established to receive a statutory allocation of slot machine gaming revenue for the race horse industry including purses and breeder awards. Purses support live racing which creates jobs and spending in Pennsylvania. Purses and breeder awards promote race horse breeding with related spending, jobs creation and green space preservation.

The interrelationship between slot machine gaming and horse race wagering at a racino has been examined in comprehensive statistical studies of racinos in other states. Results show that:

- placing slot machines at a racetrack will significantly reduce horse race wagering as customers may now bet on the available gaming product as well as on horse racing.
- the presence of live and simulcast wagering at a racino leads to significant increases in slot machine wagering.

In “The Economic Impact of Slot Machines on Pennsylvania’s Pari-Mutuel Wagering Industry: Benchmarking the Industry, 2006, 2007, 2008”, the Gaming Control Board found that:

- on-track parimutuel wagering declined with the introduction of slots.
- inter-state wagering on exports of Pennsylvania’s live horse races increased 31%.¹

¹ The increase was 22%, adjusted for inflation.

- gross terminal revenue from slot machine wagering was up 11.2% on race days.
- purses paid in Pennsylvania, the indicator of quality of racing, increased by 186% from 2006 through 2008.² This improved the racetracks' national rankings
- the number of live races increased 33% from 7,958 in 2006 to 10,578 in 2008.

All of these findings confirmed prior expectations and are indications of the success of Act 71 with respect to support of the Pennsylvania race horse industry.

Table games legislation is currently being considered to permit table gaming at the licensed slot machine gaming facilities in Pennsylvania. Following is a summary of findings in this study.

Results of prior statistical analyses of the impact of table games on slot machine wagering at other jurisdictions have concluded that:

- slot machine wagering declines 8%-13% with table games at a casino/racino. The impact varies directly with the number of table games.
 - on-track horse race wagering declines with the addition of table games at a racino.
- On the positive side, adding table games to the slot machine floor has been found to:
- increase total gaming revenue even with the decline in slot machine revenue.
 - increase non-gaming revenue such as from food, beverage and lodging operations.

Issues Associated With Table Gaming in Pennsylvania

- *Competition.* Competition from neighboring states is ramping up. Slot-machine gaming has been approved in Maryland and Ohio. In existing border gaming states, a slot-racino is being considered for Aqueduct and table games have been approved in Delaware. A local referendum for table games may be under consideration for the Charles Town, WV racino.
- *Revenue Shares Distributions.* Shares from table games revenue, as currently proposed in HB 21 and SB 1033, are different than shares from slot machine revenue. The share of table game revenue for the state tax is reduced under both bills. The share to local governments is reduced (HB21) or eliminated (SB 1033). Revenue shares to both the economic development fund and the PRHDF are eliminated under both bills. The foregone revenue from state and local governments, economic development and the race horse industry accrues to the racino operator. Comparing Pennsylvania to other states,
 - no casino gaming state in the United States makes a distinction between the percent of slot machine or table game revenues allocated to recipients.
 - Iowa, the first state to permit table games at slot machine racinos makes no distinction between the percent of revenues from slots and tables to recipients, including government and purses.
 - West Virginia, the second state to permit table games at slot machine racinos does make a distinction between the percent of revenues from slots and tables to recipients, including government and purses.
- *Mountaineer Racino Case Study.* An analysis of changes in slot machine and total (slot plus table) revenue at Mountaineer Park in 2008 compared to 2006 when there was no competition from Pennsylvania and no table games, showed that:

² The increase was 167%, adjusted for inflation.

- slot machine revenue, adjusted for inflation, decreased 26% due to factors such as new competition from PA racinos and the introduction of table games.
- adding table games offset part of the decline but total revenue still fell 8%.
- if revenue allocations to recipients from tables had been the same as for slots in West Virginia, as in all casino states and the Iowa slot-table racinos, revenue to government, the race horse industry and the racino operator would each have decreased 8%, equal to the decrease in total (slot plus table) revenue.
- the effect of reducing government and race horse industry revenue shares from table games with a corresponding increase in racino operator revenue, created unintended winners and losers at Mountaineer Park. Total table and slot revenues to government and the race horse industry fell 15% while racino operator revenues increased 1.5%.
- *Effective Gaming Tax Rates.*
 - all casino gaming states in 2008, except West Virginia, had equal effective payments to government from both slot machines and table game revenue ranging from as low as 7.4% in Nevada to as high as 36% in Illinois.
 - compared to other casino and racino gaming states, Pennsylvania is in the upper tier below five other racino states including the border racino states of DE, NY and WV.
 - compared to other casino and slot-table racino states, Pennsylvania's table games tax would rank in the lower tier under provisions of HB 21 and SB 1033.
- *Slots-Tables Revenue Comparison*
 - statistics given in the Mountaineer Gaming Group, Inc. 10-K Annual Report indicated that average daily revenue per table game position at their Mountaineer, WV racino, was double that of average daily slot machine win.
 - in the same Annual Report, food, beverage and lodging revenues were said to have increased as a result of table games.
 - table revenue as a percent of total revenue varies from 9%-17% in the Midwest casino states to 22% in West Virginia and over 30% in Atlantic City and Nevada. The relatively high percentage of table games revenue in West Virginia could possibly be due to the low after-tax treatment of tables versus slots relative to a more market-oriented decision based on revenue-neutral equal after-tax treatment of slots and tables.

Review of Innovation Group Study

Thalheimer Research Associates was asked by the Pennsylvania Equine Coalition to review and comment on the Innovation Group's Technical Memorandum, "PA Table Games Impact", April 2009. The review is included in the body of our report. We refer to the report as the IG Report. Some of the relevant findings from our review were:

- Neither statistical nor conclusive ad hoc evidence was presented to support the claim that the introduction of table games results in an increase in slot machine revenue.
- The IG Report excludes slot-machine gaming states from its comparative effective tax rate table and uses a 55% effective gaming tax rate for Pennsylvania. This rate includes payments to the PRHDF which are not payments to government. The effective rate also does not take into account the deduction of promotional play by the gaming licensees from gross gaming revenues. Making these adjustments for comparison to the other racino states with which Pennsylvania competes, the effective 2008 calendar year rate was 39.2%.

- The IG Report assumes a 12% table games tax rate, after deduction of promotional play. SB 1033 also uses a 12% table games state tax rate and provides for no payments to other revenue recipients. Although not discussed in the IG Report, a reduction in state government's share from table games below that from slot machines could create losses to government.
- The IG Report discusses, in general terms, capital and operating expenses for table games but provides no quantitative information on these costs.
- The IG Report does not discuss table games revenue which have been found to be higher per position than that of slot machine revenue. The profitability and feasibility of table games depends on after-tax considerations of *both* revenues and expenses.

Additional Comments

- To the extent that lower revenue shares to horse racing in the state result in less racing, current slot machine gaming revenues will be adversely affected.
- Changing the allocation of revenue to recipients from table games versus slot machines has resulted in creation of winners and losers not intended in the original enabling slot machine legislation. The creation of unintended winners and losers when slot revenue decreases, is not dependent on whether the loss in slot revenue is from table games, competition, or other factors (ex. changes in the economy).
- There is a point at which gaming taxes may stifle investment required for racinos/casinos to be competitive with gaming venues in competing gaming states. A comparison with payments to government in other gaming states was made and Pennsylvania ranked below five other gaming states.
- This study did not specifically address the issue of table games profit

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An Analysis of Slot Machine and Proposed Table Gaming Legislation in Pennsylvania With Emphasis of Their Effect on the Pennsylvania Race Horse Industry

Introduction

In this study the effect of the Pennsylvania Racehorse Gaming and Development Act (Act 71) of 2004 permitting slot machines at the Pennsylvania racetracks and other locations is discussed. Emphasis is placed on Act 71's effect on the Pennsylvania race horse industry. This discussion is followed by an analysis of the potential effects of proposed legislation to permit table games at licensed gaming facilities in Pennsylvania.

Reasons for Permitting Alternative Gaming at Parimutuel Racetracks

Nationally, horse race wagering has been in a state of decline for over three decades. Adjusted for inflation, wagering on horse racing in the United States has decreased 52% from its peak in 1978 through 2006.³ The reasons for this decline are well known and, in particular, include the introduction and growth of state lottery and casino gaming over the period. Published statistical analyses of parimutuel horse race wagering have found that the introduction and growth of casino gaming has reduced horse race wagering at racetracks in New Jersey by 30% to 39%. Similarly, the introduction of state lotteries in various states and at various times has been found to reduce horse race wagering by anywhere from 10% to 36%.⁴

As horse race wagering has declined, so have purses for horsemen funded out of that wagering. Recognizing this well-documented threat to the horse racing and breeding industry, a number of states have permitted racetracks to expand their product line to offer alternative forms of gaming, i.e. casino style gaming, at their location. Racetracks with casino gaming are referred to as "racinos". Currently, 14 states including Pennsylvania, offer such gaming alternatives at their racetracks.⁵ In most cases, racino legislation provides for funding of purses from gaming revenue at racetracks to offset the decline in purses directly related to the decline in parimutuel wagering caused by casino and lottery competition.

³ Association of Racing Commissioners, Inc., "Pari-Mutuel Racing, A Statistical Summary", 1960-2006.

⁴ For a review of the economic literature on the effect of competition on horse race wagering, see, for example, Thalheimer, R., and Ali, M. M., "Pari-Mutuel Horse Race Wagering-Competition from Within and Outside the Industry", Chapter 1, Handbook of Sports and Lottery Markets, Hausch, D.B., and Ziembra, W.T., editors, Elsevier Press, 2008.

⁵ AL (Class II Slots 2003), AR (Electronic Games of Skill 2006), DE (VLT's 1995, tables/sports 2009), FL (Card Rooms 1996, Slots 2006), IA (Slots 1995, Tables Dec. 2004), IN (Slots 2008), LA (Slots, 2002), ME (Slots 2005), MN (Card Rooms 2000), NM (Slots 1998), NY (VLT's 2004), OK (Class II Slots 2005), RI (VLT's 1992), PA (Slots 2006), WV (VLT's 1990/1994, Tables 2007).

The Importance of Purses and Live Racing to the Race Horse Industry

Purses are the “lifeblood” of the race horse industry providing revenues directly to horsemen who compete at a state’s racetracks. Purse revenue is earned by horsemen for their operations as a result of training their horses to win purse revenue offered for races at a state’s racetracks. The greater the number of live races offered at a state’s racetracks, adequately funded by purses, the greater the viability of the race horse industry in that state. Jobs and spending associated with the care and maintenance of horses are created every day a horse is kept in training or racing at a racetrack and so they increase with the number of live race days offered at a state’s racetracks. The level of purses reflects the quality of races conducted at a racetrack. Higher purses denote better quality race horses and competition. Racetrack customers wager on these races providing revenue to the racetrack. Similarly, customers at wagering locations in other in-state and out-of-state locations wager on simulcasts of the live race product at their respective venues providing additional revenue to the racetrack conducting the live races.

In addition to the racetrack and the race horse owner/trainer sectors of the race horse industry, there is a third industry sector - race horse breeders. While purses provide revenues directly to horsemen (owners and trainers) through winnings of their horses, purses and breeder awards also provide revenues to race horse breeders. It has been shown through statistical analysis that as purses increase there is an increase in the supply of foals, yearlings and associated breeding stock (mares and stallions). The impact of purses on breeding is not immediate since there is a time lag during which breeders must breed new mares and bring the resulting foals to market in response to increases in yearling revenue. Agricultural jobs are created in direct proportion to the care and maintenance required for maintaining mares, stallions, foals, weanling and yearlings on race horse farms. As purses increase, these agriculturally related jobs increase as well.⁶

The Interrelationship of Slot Machine Gaming and Parimutuel Wagering at Racetracks- Evidence from Statistical Analyses

The effect of placing slot machines at racetracks (racinos) is discussed in this section of the report.

The Relationship of Slot Machine Gaming to Horse Race Wagering at a Racino

The introduction of slot machines at racetracks (racinos) has resulted in a decline in inflation-adjusted on-track (live and import simulcast) wagering. For example, in a published statistical analysis of the introduction of a limited number of VLT’s at Mountaineer Park racetrack in West Virginia in 1990, parimutuel handle was found to have declined 24%.⁷ In an update and expansion of the earlier statistical analysis of Mountaineer Park, the increase of number of VLT’s from 400 to 3,000 was found to have caused a 39% decrease in on-track (live and import

⁶ Neibergs, J.S. and Thalheimer, R., “Price Expectations and Supply Response in the Thoroughbred Yearling Market, Journal of Agricultural and Applied Economics, 1997.

⁷ Thalheimer, R. (1998), “Parimutuel Wagering and Video Gaming: A Racetrack Portfolio”, Applied Economics.

simulcast) parimutuel horse race wagering.⁸ These results suggest that when slot machines are made available at racetracks, existing customers will play the new games and reduce their betting on horse races at the racetrack. The results also suggest that new racetrack customers attracted by the availability of slot machine gaming do not bet on the horse races offered to any great extent.

While statistical analyses have shown that on-track horse race wagering at a racino declines with the availability of slot machines, the ability to export simulcasts of live races at the racino to other state and national betting locations has been found to increase dramatically. For example, prior to 2001, Mountaineer Park did not export the simulcasts of its live races to other state and national locations due to lack of demand. In 2008, handle from the export of live races at Mountaineer was \$363 million.⁹ The significance of the growth in export handle is that ADW (advance deposit wagering) and internet betting are positive areas of growth in horse race wagering made possible in many cases by significant increases in the quality of races at racinos due to large increases in purses funded by slot machine revenue.

The Relationship of On-Track Horse Racing to Slot Machine Gaming at a Racino

The presence of live racing at a racino has been found to result in an increase in slot machine wagering at the facility. For example, in the published statistical analysis of horse racing and slot machine gaming at Mountaineer Park racino mentioned above, it was found that slot machine (VLT) wagering increased significantly when live and import simulcast racing were offered.¹⁰ Results of the analysis indicated that slot machine wagering would have decreased 18% if live racing were to have ceased at Mountaineer Park. The presence of year-round racing at Mountaineer increased slot machine wagering and revenue sufficiently to cover the cost of VLT generated purses and to contribute to other operating costs of the racino.

A similar conclusion was reached in a recent statistical analysis of racing and gaming at Prairie Meadows racino in Iowa.¹¹ In that study, using monthly data from 1993 through 2006, it was found that the presence of live horse racing generated a 12.9% increase in slot machine wagering in months when it was offered. Similarly, the growth in import simulcast horse races per day generated a 13% increase in slot machine wagering. As in the earlier statistical analysis of Mountaineer Park, the presence of live and simulcast wagering increased slot machine wagering and revenue sufficiently to cover the cost of purses and contribute to other racino operating costs.

⁸ Thalheimer, R. (2008), "Government Restrictions and the Demand for Casino and Parimutuel Wagering", *Applied Economics*, 40(6).

⁹ West Virginia Horse Racing Commission, 2008 Annual Report.

¹⁰ Thalheimer, R. (2008), "Government Restrictions and the Demand for Casino and Parimutuel Wagering", *Applied Economics*, 40(6).

¹¹ Thalheimer Research Associates (2008), "An Economic-Statistical Analysis of Racing and Slot Machine Wagering at Prairie Meadows Racetrack and Casino©".

Pennsylvania Slot Machine Gaming

In this section of the report the rationale and early results of permitting slot machine gaming in Pennsylvania are discussed. The emphasis in this section is on the effect of slot machine gaming on the Pennsylvania race horse industry.

Pennsylvania Slot Machine Gaming Legislation

The Pennsylvania Racehorse Gaming and Development Act (Act 71) of 2004 was designed to¹²:

- Provide property tax relief
- Reinventorize the Pennsylvania horse racing industry
- Spur economic development
- Set up an oversight agency

Emphasizing its importance in permitting slot machine gaming in Pennsylvania, the race horse industry is specifically referenced in (2) and (4) of the Legislative Intent section of Act 71 authorizing limited gaming as follows (4 Pa. Code §1102)¹³:

- (2) *The authorization of limited gaming by the installation and operation of slot machines as authorized in this part is intended to enhance live horse racing, breeding programs, entertainment and employment in this Commonwealth (emphasis added).*
- (3) The authorization of limited gaming is intended to provide a significant source of new revenue to the Commonwealth to support property tax relief, wage tax reduction, economic development opportunities and other similar initiatives.
- (4) *The authorization of limited gaming is intended to positively assist the Commonwealth's horse racing industry, support programs intended to foster and promote horse breeding and improve the living and working conditions of personnel who work and reside in and around the stable and backside areas of the racetrack (emphasis added).*
- (5) The authorization of limited gaming is intended to provide broad economic opportunities to the citizens of this Commonwealth and shall be implemented in such a manner as to prevent possible monopolization by establishing reasonable restrictions on the control of multiple licensed gaming facilities in this Commonwealth.
- (6) The authorization of limited gaming is intended to enhance the further development of the tourism market throughout this Commonwealth, including, but not limited to, year-round recreational and tourism locations in this Commonwealth.

Act 71 provided for seven Category 1 gaming licensees (racetrack-slot machine facilities), five Category 2 gaming licensees (stand-alone slot machine facilities) and two smaller Category

¹² Melinda M. Tucker, Director of Racetrack Gaming, Pennsylvania Gaming Control Board, July 2, 2009, HBPA Summer Convention, June 30-July 3, 2009, Charlestown, WV.

¹³ 4 Pa. Code §1102 (Pennsylvania Code, Title 4, Amusements; Part II. Gaming; Chapter 11, §1102).

3 gaming licensees. For the first six months, Category 1 and Category 2 licensees can have up to 3,000 slot machines. After six months, Category 1 and Category 2 licensees, subject to approval, can have up to an additional 2,000 slot machines. Category 3 licensees can have up to 500 slot machines.

Category 1 and Category 2 licensees must pay an initial one-time license fee of \$50 million. There are provisions for return of all or part of the initial license fee if certain provisions, including increasing the statutory maximum number of permissible licensed facilities. Category 3 licensees must pay an initial one-time license fee of \$5 million. Permitting gaming licenses restricted in number and location, creates monopoly profits part of which may accrue to the state and other legislatively specified programs.

Currently there are six operational Category 1 licensees and a seventh whose gaming license is currently under review. The Licensees are listed below:

- Existing racetracks:
 - *Mohegan Sun at Pocono Downs (harness)*
 - temporary casino opened Nov. 2006, permanent casino opened July 2008
 - *Philadelphia Park (thoroughbred)*
 - temporary casino opened Dec. 2006
 - *The Meadows (harness)*
 - temporary casino opened June 2007, permanent casino opened April 2009
 - *Hollywood Casino at Penn National (thoroughbred)*
 - permanent casino opened February 2008
- Newly constructed racetracks:
 - *Harrah's Chester Downs (harness)*
 - casino open Jan. 2007
 - racing commenced Sept. 2007
 - *Presque Isle (thoroughbred)*
 - casino open Feb. 2007
 - racing commenced Sept. 2007
 - *Valley View Downs (harness)*
 - not open (racing license granted, gaming license under review)

In addition to the Category 1 licensees listed above, there are currently three operational Category 2 licensees, Mount Airy (October 2007), Sands Beth Works (May 2009), and Rivers (August 2009).

As pointed out earlier in this report, live racing is essential to the race horse industry. Without live racing, or with only limited live racing, the viability of a state's race horse industry would be in doubt and there would be little economic impact of the race horse industry on the state's economy. The importance of live racing to Pennsylvania is noted in the code by the requirement of Category 1 licensees to conduct a minimum number of live race days (4 Pa. Code §1303). A new licensee that has previously not conducted live racing must conduct a minimum of 150 days of live racing two years following the issuance of a Category 1 license. For all other Category 1 licensees which have conducted live racing for at least two years prior to the issuance

of a Category 1 license, live racing must be conducted for at least 95% of the total number of racing days scheduled in 1986 at that racetrack.

Slot machine revenue, gross terminal revenue, less promotional allowances and certain administrative deductions, is distributed as shown in Table 1.

Table 1: Allocation of Gross Terminal Revenue FY08

Gaming Revenue Recipient	Statutory Percent of Gross Terminal Revenue after Promotional Allowances	Percent of Gross Terminal Revenue before Deduction of Promotional Allowances – FY08 (1)
State Gaming Fund – Slot Machine Tax	34%	31.0%
State Gaming Fund – Local Share Assessment	4%	3.6%
PA Gaming Economic Development Fund	5%	4.6%
PA Race Horse Development Fund (PRHDF) (2)	12%	10.9%
Retained By Licensee (residual) (3)	45%	49.9%
(1) Promotional plays were 8.94% of gross terminal revenue in FY08. Gross revenue before any adjustments was \$1,774,071,542. (2) Maximum contribution for each licensee. (3) Each Category 1 licensee is required to pay \$5 million over the initial five-year period following the initial issuance of a Category 1 slot machine license, and an amount between \$250,000 and \$1 million for the following five years, for the improvement and maintenance of the backside area at its facility. ¹⁴ Source: Pennsylvania Gaming Control Board.		

The last column of Table 1 gives the “effective” percent paid out of slot machine gaming revenue as a percent of gross terminal revenue (amount played less amount paid out in prizes) before any adjustments. Promotional play deductions were 8.9% of gross terminal revenue in FY08. For this reason, the percent of gross terminal revenue effectively returned to each statutory recipient was reduced by 8.9%. Similarly, the Licensee’s residual share of gross terminal revenue was effectively increased by 8.9% from 45% to 49.9%.

The amount of revenue to the PRHDF to be distributed to each Category 1 licensee is computed as 18% of gross terminal revenue less deductions, summed over all Category 1 facilities. All three categories of licensees make contributions to the PRHDF. Each gaming licensee contributes to the PRDHF in proportion to its percent of total gaming revenue summed across all gaming licensees. The contribution of each gaming licensee to the PRHDF is capped at 12% of gross terminal revenue at its facility.¹⁵ As more Categories 2 and 3 licensees come on-line the contribution to the PRHDF increases until the point at which the 18% maximum distribution for each Category 1 racetrack is reached. While there is a 12% maximum contribution for each facility according to the allocation formula, as contributions to the PRHDF from the Category 2 and 3 casinos increase, required contribution of each facility to the PRHDF will fall below 12%. This, in turn, will lead to an increase in the amount retained by the licensee.

¹⁴ 4 Pa. Code §1401

¹⁵ 4 Pa. Code §1405.

(b) “...., the licensed gaming entity’s assessment shall be the percentage of each licensed entity’s gross terminal revenue, equal to an amount calculated as “A” multiplied by “B”, with “A” being equal to each licensed gaming entity’s gross terminal revenue for that day divided by the total gross terminal revenue for that day from all licensed entities, and “B” being equal to 18% of that days’ gross terminal revenue for all active and operating Category 1 licensees conducting live racing.”

(c) “Daily assessment cap. – If the resulting daily assessment for a licensed gaming entity exceeds 12% of that entity’s gross terminal revenue for the day, the licensed gaming entity shall pay a daily assessment of 12% of its gross terminal revenue for the day.

As pointed out earlier in this report, purses and breeder awards are the “life’s blood” of the race horse industry. Recognizing the importance of purses and breeder awards to the Pennsylvania race horse industry, the State legislature provided by statute for the following distribution of PRHDF funds from each Category 1, 2 or 3 facility at its maximum contribution of 12% of gross terminal revenue after deductions:

- 80% (of 12%) or 9.6% for purses
- 16% (of 12%) or 1.92% for breeder awards
- 4% (of 12%) or 0.48% for health and pension benefits for horsemen

Impact of Pennsylvania Slot Machine Gaming Legislation on the Race Horse Industry

The introduction of slot machine gaming at licensed facilities in Pennsylvania has had the desired effect on the race horse industry. The Pennsylvania Gaming and Control Board has published a comprehensive review of the effects of the introduction of slot machine gaming on the State’s race horse industry entitled, “The Economic Impact of Slot Machines on Pennsylvania’s Pari-Mutuel Wagering Industry, Benchmarking the Industry, 2006, 2007, 2008” (PGCB Benchmarking Study).¹⁶ Many of the findings of this report are incorporated into the following discussion.

Impact of Slot Machine Gaming on In-State Parimutuel Horse Race Wagering

The evidence of the effect of casino-type gaming on horse race wagering described earlier in this report is that parimutuel horse race wagering, adjusted for inflation, decreases significantly when faced with casino-type competition in the market area. In addition, the existing evidence indicates that when slot machine gaming is introduced on the premises of a parimutuel racetrack, on-track handle decreases significantly. In Pennsylvania, the introduction of slot machine gaming at both racetrack (Category 1) and non-racetrack (Categories 2 and 3) gaming facilities has created competition between those facilities. Pari-mutuel handle at an existing Category 1 facility is expected to decrease with gaming competition from other Category 1, 2, and 3 gaming facilities. On-track parimutuel handle at each existing racetrack is expected to decrease even more from the addition of slot machine gaming to that facility. As reported in the PGCB Benchmarking Report, total betting on parimutuel horse racing in Pennsylvania from all sources, including on-track, off-track wagering facilities, and between racetracks, was found to have decreased 15% from 2006 through 2008. Adjusted for inflation, in-state parimutuel handle decreased 21% from 2006 through 2008. Gaming was not available for most of the 2006 base year period - one month at Philadelphia Park and two months at Pocono Downs. On the other hand gaming was fully phased in at all six operational Category 1 racetracks in 2008. The finding that in-state parimutuel handle decreased significantly, even with the addition of two new racetracks in 2007 (Harrah’s Chester and Presque Isle) is not surprising given the evidence cited earlier in this report.

¹⁶ Tucker, M. M., and Kile, K. C. (2009), The Economic Impact of Slot Machines on Pennsylvania’s Pari-Mutuel Wagering Industry: Benchmarking the Industry, 2006, 2007, 2008, Pennsylvania Gaming Control Board.

Impact of Slot Machine Gaming on Live Racing

Legislation permitting racetracks to have slot machine gaming in Pennsylvania recognizes the importance of live racing and stipulates that live racing be preserved at existing racetracks and expanded with the addition of racing at new racetracks. Because of the ability to have slot machine gaming at racetracks, two new Pennsylvania racetracks have been constructed (Presque Isle and Harrah's Chester). A third potential licensee (Valley View Downs) has been granted a harness racing license and its gaming license is currently under review. As reported in the PGCB Benchmarking Report, the number of live races increased 33% from 7,958 in 2006 to 10,578 in 2008. As mentioned earlier, live racing creates jobs and spending associated with the care and maintenance of horses every day a horse is in training or racing in Pennsylvania.

Impact of Live Racing on Slot Machine Wagering

As mentioned earlier, statistical analysis of slot machine wagering at both Mountaineer Park, WV and Prairie Meadows, IA racinos indicate that the presence of live racing at the racinos results in a significant increase in slot machine wagering. This finding has been confirmed for the Pennsylvania racinos. As reported in the PGCB Benchmarking Report, gross terminal revenue from slot machine wagering at Category 1 licensees was 11.2% higher on race days compared to non-race days.

Impact of Slot Machine Gaming on Purses

Purses paid in Pennsylvania increased by 186% from \$62.3 million to \$177.9 million from 2006 through 2008 as reported in the PGCB Benchmarking Report. Adjusted for inflation, this was a 167% increase. The increase in purses supports not only live racing but also the race horse breeding industry in the state, as intended.

Impact of Purses from Gaming on Relative National Ranking of PA Racetracks

Purses paid by a racetrack are an indication of the quality of races at that racetrack relative to those offered at other racetracks. Appendix 1 shows the top 50 U. S. racetracks with 10 or more days of racing in 2008 ranked by average daily purse. In 2008 Philadelphia Park ranked 13th in the U.S. (up from 32nd in 2005), Presque Isle, 21st and Penn National 46th (up from 60th in 2005).¹⁷ Appendix 2 shows U.S. harness racetracks with 10 or more days of racing in 2008 ranked by average daily purses offered. In 2008, Harrah's Chester ranked 3rd, Pocono ranked 5th, and The Meadows ranked 7th in the U.S. It can be seen that the payment of purses from slot machine revenues has resulted in high quality racing in Pennsylvania.

¹⁷ Based on data from the article: Hammonds, Evan I., "Pressure Drop", The Blood Horse, March 7, 2009.

Impact of Purses from Gaming on Exported Live Races to Out-Of-State Wagering Sites

The prior evidence is that higher purses, funded by revenue from slot machine wagering, result in a significant increase in wagering on exported live horse races simulcast from a state's racetracks to out-of-state wagering locations at national and international locations. Not surprisingly, this was also the case in Pennsylvania with the advent of purses funded from gaming revenues. As reported in the PGCB Benchmarking Report, inter-state exports of Pennsylvania's live horse races increased 31% from 2006 through 2008. Adjusted for inflation, this was a 22% increase.

Impact of Purses from Gaming on Pennsylvania Race Horse Breeding Industry

The impact of an increase in purses and breeder awards on the breeding industry is not immediate since there is a lag between the increase in yearling revenue and the time it takes to breed new mares and bring the resulting foals to market. Based on prior evidence, the impact on the Pennsylvania breeding industry from increasing purses should become evident in the next several years.

The Relationship of Table Gaming to Slot Machine and Parimutuel Wagering- Evidence from Statistical Analysis

Statistical analysis of factors affecting changes in slot machine wagering (handle), rather than slot machine revenue, is the preferred way to accurately determine the effect of table games (or other factors) on slot machine revenue at a casino or racino.¹⁸ Using statistical analysis, the effect on slot machine wagering from offering table games is determined by "statistically" holding constant changes in other factors including win percent which also affect slot machine wagering over the estimation period. Since the change in handle is estimated, "holding constant" changes in win percent, the change in revenue (handle x win percent) is equivalent to the change in handle. An insight into what might be expected when table games are included in the gaming mix can be obtained from a review of the economics of gaming literature.

A comprehensive statistical analysis of factors affecting slot machine handle at 24 riverboat and 3 racino markets in the Midwestern states of Illinois, Iowa and Missouri has been published

¹⁸ Changes in *revenue*(handle x win %) are affected not only by changes in the "explanatory factors" affecting *handle*, but also by independent changes in *win %* which are multiplied times handle, independent of changes in those factors affecting handle. This creates a statistical problem since, each factor's effect on slot revenue is not estimated "holding constant" all other factors as in the more accurate estimates using slot machine *handle* as the variable of interest. Estimates using revenue as the variable of interest may still provide insight into economic relationships although not as accurate as those using handle. The literature review in this report does not include articles on the relationship of factors affecting *revenue*, including table games, for the reasons given. Examples of revenue studies are: Levitsky, I., Assane, D., and Robinson, W., Applied Economics Letters , 7, 2000, Thalheimer, R. and Ali, M.M., 40(18), 2008.

in a peer-reviewed economics journal. One finding of that study was that the presence and growth in table games resulted in a 13% reduction in slot machine handle, holding constant changes in other factors affecting changes in slot machine handle such as number of slot machines, slot machine win percent, population-weighted access by market area customers to the gaming facility and to competing gaming facilities, and market area income.¹⁹

The only known statistical analysis of factors affecting slot machine handle at a racino with table games, was of Prairie Meadows, Iowa, the first racino in the United States to have table games (December 2004). In that study, using monthly data from 1995 through 2006, it was found that slot machine handle decreased 8% after the introduction of table games, holding constant changes in other factors also affecting slot machine handle over the period such as number of slots machines, slot machine win percent, days of live horse racing, number of import horse race simulcasts per day, quality horse races, competition from other gaming venues, and market area income. It was also found that parimutuel revenue decreased significantly with the addition of table games.²⁰

Results of these statistical analyses indicate that adding table games to the gaming mix at a casino or racino has resulted in an 8%-13% decline in slot machine handle. This implies that existing customers who wager on slot machines will switch some of their play to wager on tables games when this alternative becomes available. Also implied is that while some new customers who are attracted to the table games may also play the slot machines, the net effect is not enough to counter the reduction in slot machine play from existing customers. Finally, the impact of table games on slot machine handle increases at a decreasing rate with an increase in the number of table games.²¹ It should be noted that inflation-adjusted total (slot plus table) revenue increased over the study period.

Potential Table Games at Pennsylvania's Slot Machine Racinos/Casinos - Issues

The following discussion investigates reasons for, and the potential impact of, permitting table games at Pennsylvania's licensed slot machine gaming facilities.

Competition from Other States for Current Pennsylvania Gaming Licensees

One of the rationales for permitting table games at licensed Pennsylvania gaming facilities, as it was for permitting slot machines, is the concern that Pennsylvania will face increased competition from gaming venues in surrounding states. Figure 1 on the following page gives the locations of current and expected gaming facility locations in Pennsylvania. As can be seen from the map, the Pennsylvania gaming locations currently face competition from casinos in the bordering state of New Jersey and racinos in the bordering states of Delaware, New York and West Virginia. Table games were placed at two of the four West Virginia racinos – Mountaineer

¹⁹ Thalheimer, R. and Ali, M.M., "'The Demand for Casino Gaming", *Applied Economics*, 35(8): 2003.

²⁰ Thalheimer Research Associates, "An Economic-Statistical Analysis of Racing and Slot Machine Wagering at Prairie Meadows Racetrack and Casino©", April 18, 2008.

²¹ Since in these estimates win percent is "held constant", the change in handle is equivalent to a change in revenue (handle x win percent).

and Wheeling beginning in 2007 and at Tri-State, in August of 2008. The fourth racino, Charles Town, currently does not have table games but is eligible to have them, subject to local referendum. Aqueduct racetrack in New York is scheduled to become a racino with 4,500 slot machines. The New York racinos do not currently have table games although legislation is being considered to permit electronic table gaming there. Delaware racinos currently have electronic table games, and legislation has just been passed permitting table games and sports betting at those locations.

There are two new competitors in Pennsylvania’s gaming market. Maryland passed a constitutional amendment in 2008 permitting 15,000 slot machines at five locations in the state. Ohio has recently permitted slot machine gaming under the State lottery at its seven racetracks by Executive Order.

The addition of table games to existing slot-only racinos in competing states such as Delaware and West Virginia could possibly lead to a decrease in slot machine revenue in Pennsylvania. A statement to this effect can be found in the 2008 SEC filing of Penn National Gaming, Inc.’s Annual Report (10-K) under the Competition section. In that report the following statement is made (p. 9).

“Any other significant increase in the competition in the region, including the approval to operate table games at our property in West Virginia, could negatively impact the operations of Hollywood Casino at Penn National Race Course.”

Figure 1: Pennsylvania and Surrounding States Gaming Locations

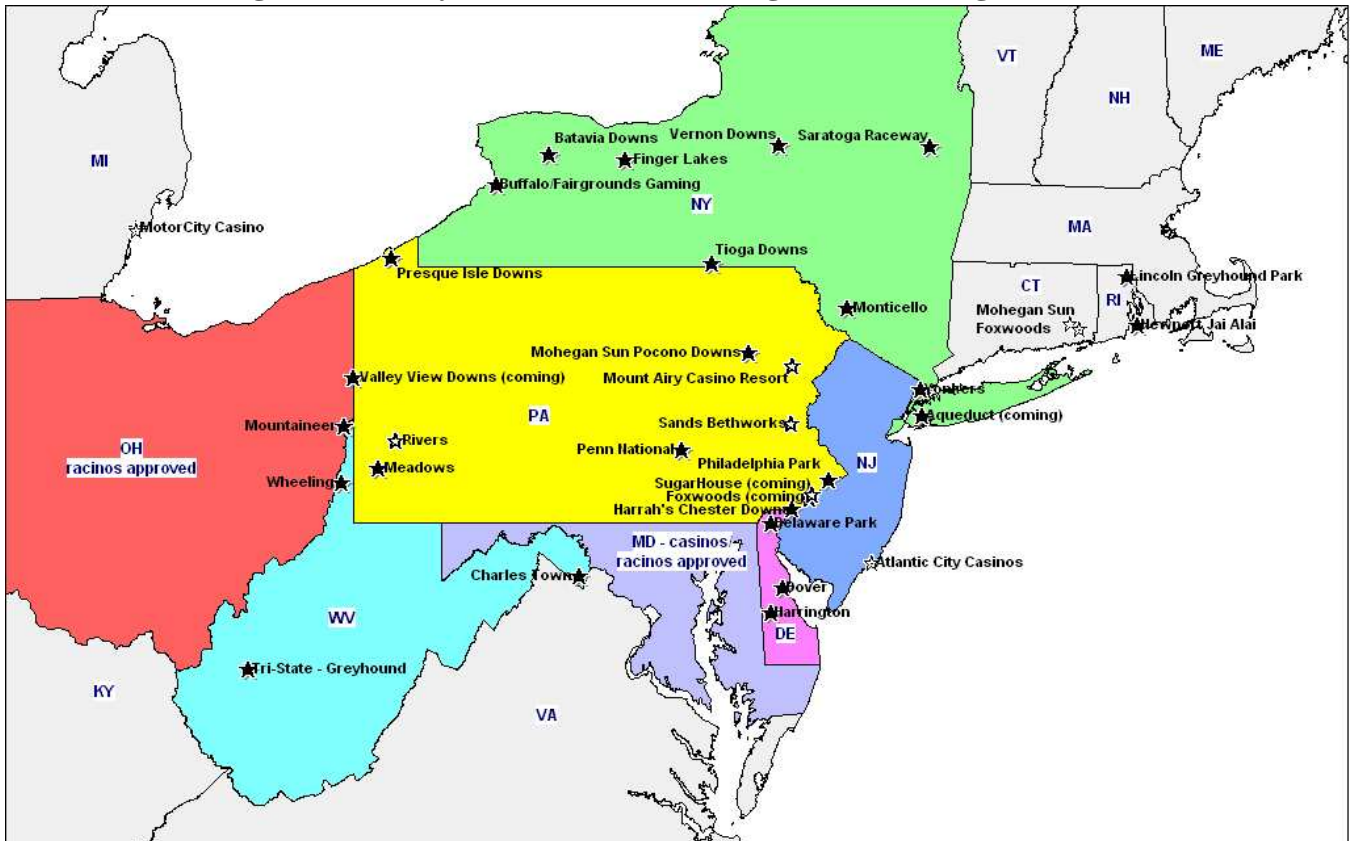


Table Games Experience - Mountaineer Casino, Racetrack & Resort

MTR Gaming Group, Inc. (MTR), is a publicly traded company with racino properties including Presque Isle Downs & Casino in Erie, Pennsylvania and Mountaineer Casino, Racetrack & Resort in the border state of West Virginia. MTR also owns another racetrack in a state bordering Pennsylvania, Scioto Downs Raceway in Columbus, Ohio, which has just (2009) become eligible for a racino license, along with the six other Ohio racetracks.

Since MTR is publicly traded, information on its experience with table games is informative and well documented in the 2008 10-K Annual Report filed with the United States Securities and Exchange Commission. Following is the Corporation's discussion of operating results (pp. 31-32):

“During the year ended December 31, 2008, Mountaineer's operating results (particularly gaming and food, beverage and lodging) benefited, as expected, from the introduction of poker and table games in the fourth quarter of 2007, but continued to be adversely affected by competition, primarily from the implementation of slot operations in Pennsylvania. Net revenues increased by \$28.6 million, or 10.9%, primarily due to a \$24.1 million increase in gaming revenues. Net revenues earned from food, beverage and lodging operations increased by \$4.6 million, and net revenues earned from other sources, including parimutuel commissions, increased by \$1.3 million. Promotional allowances increased by \$1.4 million. Mountaineer's operating margin increased to 12.1% in 2008 from 11.0% in 2007”.

As anticipated, broadening the gaming mix available to customers by adding table games to the existing slot machine product resulted in an increase in overall gaming revenues. An interesting observation made above is that revenues from food, beverage and lodging operations also increased. Such ancillary revenues are retained entirely by the racetrack and are not subject to state and local gaming taxes or payment to purses and breeder awards for horsemen who race their horses at the racetrack.

On the other hand, as expected, slot machine revenues declined over the period. This decline was attributed by the Corporation to continued competition from the Pennsylvania racinos. It should be noted that Presque Isle which opened February 28, 2007 was open a full 10 months that year and the Meadows which opened on June 11, 2007 was in operation for little over a half year in 2007. It should also be noted that table games, starting with poker tables, were introduced in October 2007. For this reason, 2008 was the first full-year for measuring the impact of table games on slot machine revenues at Mountaineer. According to prior statistical studies cited earlier in this report the introduction of table games is expected to contribute to the decline in slot machine gaming, adjusted for inflation, in 2008.

When comparing slot machine and table game revenues it is informative to compare average daily revenue yields from each. Average daily win per slot and per table game were also mentioned in the operating results section of MTR's 10-K. Average daily win per slot was found to have decreased from \$194 in 2007 to \$175 in 2008. Average daily win per table game was reported as \$2,104 per day over the same period. Assuming six positions per table game for

comparison's sake, the average daily win per table game position would have been \$351 per day in 2008 or about twice that of average daily slot machine win.

In MTR's discussion of operating results, the Corporation states (p. 33):

“We believe table games at Mountaineer will continue to enhance its competitive position by drawing new customers and driving increased play from our existing customers, which may contribute to Mountaineer's gaming revenue growth.”

This observation lends support to the findings of prior statistical analyses cited earlier in this report that the introduction and growth of table games results in a decline in slot machine handle.

The picture becomes clearer when the changes in revenue are adjusted for inflation. Table 2 gives a comparison of changes in inflation-adjusted slot machine and total (slot machine plus table game) revenue for the 2006-2008 calendar years.

Table 2: Inflation-Adjusted Changes in Mountaineer's Gross Gaming Revenue 2006-2008

	Inflation-Adjusted Gross Gaming VLT Revenue*	Inflation-Adjusted Gross Gaming VLT Revenue plus Table Game Revenue*
2007 over 2006	-14.5%	-13.5%
2008 over 2007	-12.9%	6.6%
2008 over 2006 (adjusted for inflation to 2008)	-25.5%	-7.8%
<small>*Gross gaming revenue adjusted for inflation using U.S. Dep't of Labor, Bureau of Labor Statistics CPI (consumer price index). CPI: 201.6 (2006), 207.3 (2007), 215.3 (2008). Inflation Rates: 2006-2007 (2.8%), 2007-2008 (3.9%), 2006-2008 (6.8%). Note: Number of slot machines (rounded), was 3,200 in 2006, 2007, 2008. Computations: Thalheimer Research Associates. Gaming Data Source: West Virginia Lottery, on-line VLT and table games statistics aggregated from fiscal to calendar year basis. Inflation Data Source: U.S. Department of Labor, Bureau of Labor Statistics, consumer price index (CPI-U).</small>		

Note that slot machine revenues were found to have declined almost 15% in 2007. This was largely attributable to the introduction of competition from Pennsylvania over a 10 month period since poker and table games were not available for most of the year at Mountaineer. The additional decline in 2008, may be due, in part to, continuing competition from the same two Pennsylvania racinos and also, in part, to the introduction of table games at Mountaineer. Factors such as expanding Mountaineer's hours of operation to twenty-four hours per day, seven days per week also need to be considered when evaluating the effect of competition and table games on slot machines. Over the two year period 2006 through 2008, slot machine revenue at Mountaineer fell more than 25%.²² The addition of table games for the full year 2008 offset the decline in slot machine revenue resulting in an overall 8% decline in gaming revenues for the two year period. Only a statistical analysis of all factors affecting changes in gaming revenue over the period would be able to isolate the effects of competition and the introduction of table games on revenue at Mountaineer.

²² The 2006 base year for comparison was free of competition from Pennsylvania racinos and from the effect of introduction of table games. 2006 base year revenues were adjusted by inflation to 2008 to enable a comparison to 2008 revenue with fully phased in Pennsylvania racinos competition and fully phased in table games.

Proposed Table Game Legislation

Two table games bills, HB 21 (June 17), the Table Games Authorization and Control Act, and SB 1033 (July 17) have been introduced in the 2009 Session of the Pennsylvania legislature. The introduction of these bills formalizes the intent by some in Pennsylvania to legalize table gaming at the State’s licensed gaming facilities. Both bills require a table games license fee of \$10 million. A review of the bills as introduced reveals a number of differences between the intent of expanding gaming at licensed slot machine gaming facilities and expanding gaming at those facilities by permitting them to add table games to their gaming mix. The revenue provisions of HB 21 and SB 1033 are much different than those of the Pennsylvania Gaming and Race Horse Development Act (Act 71) of 2004. Table 3 gives a comparison of revenue to recipients from HB 21 and the two Senate table game bills.

Table 3: Revenue Distribution Comparison: PA Gaming and Race Horse Development Act vs. HB 21 and SB 1033

Fund	Slot Gaming Statutes Act 71	Table Gaming Bill HB 21	Table Gaming Bill SB 1033
State Tax	34%	18%	12%
Local Share Assessment	4%	2%	0%
PA Economic Development and Tourism Fund	5%	0%	0%
PA Race Horse Development Fund (PRHDF)	12%	0%	0%
PA Department of Agriculture	0%	1%	0%
Retained by Licensee	45%	79%	88%

As can be seen, the state tax from table games revenue has been reduced from 34% for slot machines under Act 71 to 18% for table games under HB 21 and 12% under SB 1033. The local share assessment under HB 21 has been reduced 50% from 4% to 2% under HB 21 and eliminated under SB 1033. Both HB 21 and SB 1033 eliminate funding for the Economic Development and Tourism Fund and the PRHDF. Under the proposed table games legislation as set forth in HB 21 and SB 1033, it can be seen that each recipient of slot machine revenue provided for in Act 71 would receive reduced or no share of table games revenue. There would be a corresponding increase in the residual share retained by the licensee from 45% of slots revenue under Act 71 to 79% of table revenue under HB 21 and 88% under SB 1033.

Treatment of Revenue from Slot Machines and Table Games in Other Gaming Jurisdictions

Table 4 gives a comparison of effective payments to government in 19 gaming states. Statutory gaming revenue allocations to purses and breeder awards in racino states are not included as payments to government since they are payments to the race horse industry as are payments to racetrack (racino operators) in those states. In a number of states, payments to purses are by contract, not statute, between the racino operator and horsemen/breeders and are not listed separately in state-reported gaming revenue statistics. In two non-racino states, New Jersey and Illinois, the casino industry funds purse supplements to racetracks. Pennsylvania ranks sixth of the seven top-tier tax states which have overall effective tax rates above 35%. The table games rate of 12% state tax as set forth in SB 1033, and 21% state²³ and local tax as set forth in HB 21, would rank Pennsylvania in the lower tier of states with both slots and tables.

²³ Includes 1% payment to the Department of Agriculture.

Table 4: Effective Slot Machine and Table Games Tax Rate Comparison of Gaming States, 2008

State	Under Lottery?	Period	Slots & Tables Revenue	Payments to Government	Effective % Gov't Slots	Effective % Gov't Tables	Overall Effective % Gov't
Rhode Island – Slot Racinos (1)	Yes	FY08	\$477,873,837	\$295,934,665	61.9%	na	61.9%
New York - Slot Racinos (2)	Yes	CAL08	\$965,074,376	\$526,420,981	54.5%	na	54.5%
Florida – Slot Racinos (3)	No	CAL08	\$245,783,459	\$122,891,730	50.0%	na	50.0%
West Virginia - Slot/Table Racinos (4)	Yes	CAL08	\$952,806,592	\$430,652,227	46.8%	29.5%	45.2%
Delaware - Slot Racinos (5)	Yes	CAL08	\$588,923,000	\$245,588,700	41.7%	na	41.7%
Pennsylvania – Slot Casinos/Racinos (6)	No	CAL08	\$1,774,071,542	\$694,693,276	39.2%	na	39.2%
Illinois – Boats (7)	No	CAL08	\$1,568,727,252	\$565,743,916	36.1%	36.1%	36.1%
Indiana – Boats	No	FY08	\$2,571,122,756	\$818,976,188	31.9%	31.9%	31.9%
Missouri – Boats	No	FY08	\$1,636,277,856	\$428,646,319	26.2%	26.2%	26.2%
New Mexico – Slot Racinos	No	FY07	\$244,295,449	\$63,516,817	26.0%	na	26.0%
Iowa – Slot/Table Racinos (8)	No	FY08	\$462,973,626	\$111,888,846	24.2%	24.2%	24.2%
Iowa – Boats	No	FY08	\$952,404,225	\$214,233,624	22.5%	22.5%	22.5%
Louisiana - Boats/Land Based	No	FY08	\$2,223,092,961	\$478,101,753	21.5%	21.5%	21.5%
Maine – Slot Racino (9)	No	CAL08	\$50,515,383	\$17,257,428	16.6%	na	16.6%
Louisiana - Slot Racinos (10)	No	FY08	\$384,375,242	\$58,309,724	15.2%	na	15.2%
Oklahoma - Slot Racinos	No	CAL08	\$92,476,585	\$13,330,884	14.4%	na	14.4%
Colorado – Limited Gaming Casinos	No	FY08	\$773,392,238	\$108,176,398	14.0%	14.0%	14.0%
Mississippi – Boats	No	FY08	\$2,721,139,216	\$344,588,730	12.7%	12.7%	12.7%
New Jersey – Atlantic City Casinos (11)	No	CAL08	\$4,503,128,873	\$417,069,092	9.3%	9.3%	9.3%
Michigan - Detroit Casinos	No	CAL08	\$1,359,584,635	\$121,040,829	8.9%	8.9%	8.9%
Nevada – Casinos	No	CAL08	\$11,071,784,348	\$814,450,405	7.4%	7.4%	7.4%

Notes:

- (1) Payments to purses are not statutory and not part of gov't share. Government (Lottery) pays for slot machines and maintenance.
- (2) Payments to purses are not statutory and not part of gov't share. Purses are by contract between licensee and horsemen's organizations.
- (3) Payments to purses are not statutory and not part of gov't share. Purses are by contract between licensee and horsemen's organizations.
- (4) Statutory payments to purses b government share. Charles Town didn't have tables in 2008. Tri-State had tables for part year in 2008. Effective tables rate is state tax (35%) less purses/breeder awards, racetrack employee pension for the three racinos with tables.
- (5) Statutory payments to purses are not part of government share. Delaware racinos did not have table games in 2008. Legislation enabling table games and sports betting at the Delaware racinos was passed in 2009.
- (6) Statutory payments to purses are not included in government share - includes payments to state, local, and economic development funds. Gross gaming revenue is before promotional allowances.
- (7) Purse supplements are paid by largest riverboats to state racetracks.
- (8) Statutory payments to purses are not part of government share.
- (9) Government gets 1% of gross & 20% of net after deduction of 1% on gross. 19% of net after 1% deduction goes to purses, tracks, otb's.
- (10) Statutory payments to purses are not part of government share.
- (11) Gross gaming revenue after adjustments and deduction of promotional allowances. Payments to government include casino redevelopment authority obligations. Purse supplements were paid to NJ racetracks out of casino redevelopment funds.

Sources:

CO: Department of Revenue, Division of Gaming
 DE: Delaware Lottery
 FL: Department of Business and Professional Regulation, Division of Pari-Mutuel Wagering
 IA: Iowa Racing and Gaming Commission
 IL: Illinois Gaming Board
 IN: Indiana Gaming Commission
 LA: Louisiana Gaming Control Board
 ME: Department of Public Safety, Gambling Control Board.
 MI: Michigan Gaming Control Board
 MS: Mississippi State Tax Commission, Miscellaneous Tax Bureau, Casino Gross Gaming Revenues
 MO: Missouri Gaming Commission
 NJ: New Jersey Casino Control Commission
 NM: New Mexico Gaming Control Board
 NV: Nevada Gaming Commission, State Gaming Control Board
 NY: New York Lottery - Lottery News, Video Gaming Reports
 OK: State Auditor & Inspector
 PA: Pennsylvania Gaming Control Board
 RI: Rhode Island Lottery
 WV: West Virginia Lottery
 Thalheimer Research Associates (TRA, Inc.)

Readily apparent from examination of Table 4 is that none of the gaming states with both slot machines and table games, with the exception of West Virginia, make a distinction between taxes on slot machines and taxes on table games. *This is true for all casino states in the U.S. as well as the first slot machine-table game racino state of Iowa.*

The fact that all of the casino gaming states have table games, even those in those states with high tax rates, indicates through market evidence that table games are a profitable addition to the casino gaming mix.

Table 5 gives the ratio of table revenue to total (slot machine plus table) revenue for casino states and the slot machine-table game racino state of West Virginia. States with the highest proportion of table to total revenue are Nevada and New Jersey followed by West Virginia. While Nevada and New Jersey are the two principal gaming destinations in the United States, the same cannot be said for the West Virginia racino locations. The year 2008 was the first full year for table games in West Virginia after their startup in October 2007.

Table 5: Gaming States Table Revenue as Percent of Total Revenue, 2008

State	Table Games Percent of Gross Gaming Revenue
Nevada (1)	33.3%
New Jersey-AC (2)	31.1%
West Virginia (3)	22.1%
Indiana	16.8%
Illinois	12.7%
Missouri	10.7%
Iowa-Racinos	10.1%
Iowa-Boats	8.8%

(1) Nevada had 199,055 slot machines and 7,150 table games in 2008.
(2) Atlantic City 34,123 slot machines and 1,624 table games in the city in 2008.
(3) Mountaineer and Wheeling Revenue - 2008 was the first full year of tables. Does not include Tri-State (part-year 2008) or Charles Town (no tables 2008).
Note: MS reports table drop but not table win, LA reports combined slot-table win, MI reports combined slot-table win.
Source: State Racing and Gaming Commissions and State Lottery for West Virginia.
Thalheimer Research Associates, Inc.

One possible reason for the relatively high proportion of table game revenue in West Virginia may be the novelty of the new table games first offered for a full year in 2008. Another possible reason may be the differences in the after-tax treatment of table games and slot machines. Table games are taxed at a lower rate than slot machines which may lead to a profit-driven shift from slot machine to table games play. Racino operators, reacting to the much lower after-tax treatment for table games, could arrange their gaming floor to favor table games more than without the tax reduction since the potential loss in slot revenue would be more than offset by the gain in after-tax table profits. All other casino gaming states have equal tax rates table games and slot machines, permitting a more customer-driven allocation of gaming space.

Implications of Differing Revenue Shares from Table and Slot Machine Gaming – Lessons Learned from Mountaineer

An examination of revenue data from the West Virginia Lottery on Mountaineer for its first full year of table gaming in 2008 shows the results of allocating different shares of recipient

revenue from slot machines and table games. Table game revenue of \$48.8 million was 19% of the \$254.2 million in total table plus slot machine revenue that year.

Table 6 compares the effective shares of payments from slot machine and table game revenues at Mountaineer Park in calendar 2008.

Table 6: Revenue Shares Comparison for Slots and Tables at Mountaineer

Revenue Share Recipient	Slot Revenue Effective Share	Table Game Revenue Effective Share
Government and other	43.8%	29.5% (1)
Racino Operator	44.2%	66% (2)
Purses	10.6%	2.5%
Breeder Awards	1.4%	2.0%
(1) State table games tax is 35% of gross revenue. Effective share is given after deduction of purses/breeder awards and 1% payment to racetrack employee pension fund. (2) Residual share plus 1% payment for racetrack employee pension fund from state tax. Computations: Thalheimer Research Associates Data Source: West Virginia Lottery, on-line VLT and table games statistics aggregated from fiscal to calendar year basis.		

There is a large difference in the distribution of revenue shares from slots and tables at Mountaineer. In effect, payments to government and purses from table games are far lower than their respective payments from slot machine revenues. Payments to breeder awards from table games are slightly greater than from slots. On the other hand, payments from table revenue to the racetrack operator are about 50% greater than from slot machine revenue.

Table 7 compares the inflation-adjusted change in overall revenue and revenue allocated to each of the recipients for calendar 2008 relative to calendar 2006. Revenue for 2006 which was free of both the effect of competition from the Pennsylvania racinos and the introduction of table games is adjusted for inflation to 2008 for comparison to calendar 2008 revenue when competition and table games were fully phased in.

Table 7: Percent Change in Inflation-Adjusted Revenue by Recipient – Mountaineer 2006-2008

Revenue Share Recipient	Slot Revenue Change	Slot plus Table Game Revenue Change
Government and other	-26.8%	-15.0%
Racino Operator	-25.1%	1.5%
Purses/Breeder Awards	-22.6%	-15.7%
Gross Revenue – All Recipients*	-25.5%	-7.8%
*Computed as total revenue summed over all share recipients in 2008 vs. 2006 (adjusted for inflation) Computations: Thalheimer Research Associates Data Source: West Virginia Lottery, on-line VLT and table games statistics aggregated from fiscal to calendar year basis.		

This table illustrates the potential hazard of assigning different shares of revenue from table games and slot machines to recipients when slot machine revenues decrease for any reason. If all recipients of slot revenue had received the same percent of revenue from tables as from slots, the large reduction in slot revenues averaging 26% over the period would have been reduced to an equal 8% reduction in total (slot plus table) revenue to all recipients. However, since government and the race horse industry receive greatly reduced revenue shares from table games, both lost substantial revenue. On the other hand, since the loss in revenue to these recipients was redistributed to the racetrack operator, the operator's 25% reduction in slot machine revenue was fully offset by the greater operator table game revenue share.

Due to an expected large increase in competition for the Pennsylvania racinos from gaming in neighboring states, slot machine revenue at the licensed gaming facilities in Pennsylvania is expected to decrease even without the addition of table games. The introduction of table games,

if approved, is further expected to decrease slot machine revenues at these operations. *Using the results of the Mountaineer experience as an illustration, it can be seen that if revenue shares to table game recipients are different than those to slot machine recipients, the addition of table games may not be beneficial to those slot machine revenue recipients who receive a lower share of table game revenues than they currently receive from slot machines.*

Review of Innovation Group Report on Potential Pennsylvania Table Games Impact

Thalheimer Research Associates has been asked to review and comment on a report which was circulated to members of the Pennsylvania Legislature entitled “PA Table Games Impact, Technical Memorandum”, Innovation, Group (IG), April 2009. The discussion refers to the report as the “IG Report”.²⁴ The following review addresses key assumptions and findings in the IG Report. Estimates of revenue from the introduction of table games at licensed Pennsylvania gaming facilities were not addressed in this review.

1. Effect of Tables on Slot Machine Revenue. Based on information from Iowa and West Virginia, the IG Report assumes that slot machine revenues will increase 3.4% to 3.6% as a direct result of the introduction of table games (p. 18).

Discussion.

Iowa

Prairie Meadows. Table games were first introduced in Iowa at Prairie Meadows in December 2004. In the IG Report’s discussion of the effect of table games on the Prairie Meadows, racino, a comparison is made of slot revenue in Dec. 03-Nov. 04, before table games, to Dec. 04-Nov. 05, after table games (p. 10). Using that comparison, slot machine revenue was found to have increased 3.1% while at the same time the number of slot machines increased 4%. The IG Report estimates, based on experience, that one-half of the 3.1% increase in tables, or 1.6%, is due to the increase in the number of slot machines, suggesting that the increase in slot machine handle, adjusted for changes in the number of slot machines was 1.6%.

Using the year-to-year comparison above, if the slot revenue figures had been adjusted for the inflation rate of 3.4% between 2004 and 2005²⁵, as would be the practice for any economic study comparing year-to-year growth rates in revenues, and if slot machine revenues had been adjusted to a per-slot machine basis, a more accurate estimate of year-to-year change between 2004 and 2005 would have been -4.4%. An even more accurate estimate of the effect of table games on slot machine revenue would be through a statistical analysis of table games on slot machine revenue, “holding constant” (statistically) changes in other factors affecting slot machine revenue over the estimation period. Sufficient data exists to perform a statistical analysis on the effect of table games

²⁴ Thalheimer Research Associates has been provided a copy of the Innovation Group Report for review by the Pennsylvania Equine Coalition.

²⁵ The U.S. Department of Labor, Bureau of Labor Statistics, reports the consumer price index (1982-84=100), the basis of the inflation rate computation, as 188.9 in 2004 and 195.3 in 2005.

on slot machine handle at Prairie Meadows. Such a study, using monthly data from 1993 through 2006, was cited earlier in this report. The estimated impact of the introduction of table games on slot machine handle there was found to be -8%.²⁶

The IG Report does not compute the increase in total (slot plus table) revenue as was reported below for the West Virginia analysis where the net change in total revenue was reported.

Dubuque and Council Bluffs. Table games were introduced at Bluffs Run (Horseshoe) and Dubuque Greyhound in March 2006. An analysis of the impact of the introduction of table games on slot machine revenue at Bluffs Run (Horseshoe) was not attempted in the IG Report due to the stated inability to separate the table games effect from that of other factors such as a major facility expansion and a change in facility operator (p. 10). On the other hand, an estimate of the impact of the introduction of table games on slot machine revenue at Dubuque Greyhound Park, where a significant slot machine and facility expansion also occurred, was provided. Slot machine handle prior to and following the introduction of table games was reported. An allocation of the increase in slot machine handle (unadjusted for inflation) was made to account for that portion of the revenue increase due to the non-gaming expansion which occurred during the comparison period along with the introduction of table games, and the “ramp-up effects from the major slot expansion a year prior..” (pp. 10-11).

Discussion

As with analysis of the effect of the introduction of table games at other locations, the estimated impacts were not adjusted for inflation. More important however is the candid observation in the IG Report that other events occurring over the pre- and post-table games periods made it difficult to separate the effect of tables on slot machine revenue from that of other events such as the “ramp-up” effect of the large increase in slot machines a year earlier and non-gaming expansion occurring along with table games. After acknowledging the difficulty of separating the table games effect from that of other events occurring at the same time, the IG Report attributes, without explanation, 20% to 30% of the increase in slot revenue to table games and the rest to other factors occurring over the comparison period. We do not dispute the fact that slot revenue increased over the estimation period. However, an alternate assumption can be made, based on statistical analyses of gaming at other locations, that the increase in slot machine revenue covered a decrease in slot revenue due to the introduction of table games and netted a positive increase due to the “other factors” occurring over the comparison period. In fact, without a statistical analysis separating the various effects occurring over the comparison periods, neither the IG Report’s assumption nor ours can be proven. We might add that since prior statistical studies cited in this report have shown that the negative impact of tables on slot machine revenue increases with the number of tables, the probable negative effect of

²⁶ Thalheimer Research Associates , “An Economic-Statistical Analysis of Racing and Slot Machine Wagering at Prairie Meadows Racetrack and Casino©”, 2008.

table games on slot revenue in this case may be smaller than that at other locations which have a larger number of table games and slots.²⁷

West Virginia

The IG Report (p.9) computes the change in slot revenues in 2007 and 2008 for Wheeling and Mountaineer to be -13.2% and -7.3%, respectively. The conclusion is drawn that since the decline in revenue in 2008 was less than the decline in 2007, the slowing of the decline suggests a positive impact of tables games on slot revenues. This finding is qualified by attributing the reduction of the negative slot revenue trend to the slowing of Pennsylvania competition as well as to introduction of tables. The increase in total (tables plus slots) revenue between 2007 and 2008 is computed to be 14%.

As in their analysis of Prairie Meadows above, adjustment for inflation and for differences in the number of slot machines should have been made to make the 2006, 2007 and 2008 slot machine revenue figures comparable. No slot machine figures are given for 2006. Adjusting the IG Report figures for inflation, the decline in slot revenue would be -15.6% in 2007 and -10.7% in 2008.²⁸ The decline in slot revenue was over 10% in both years. Much of the decline in revenue in 2007 may be attributed to the introduction of competition from two Pennsylvania racinos for 10 months of that year with an additional negative effect from table games based on prior statistical analyses of the effects of competition and table games on slot handle. While the brunt of competition from the Pennsylvania racinos was likely felt in 2007, there would have been an increase in intensity with an additional two months of competition over the year resulting in a lesser decline in slot revenue from this source in 2008. The fully phased in effect of table games could well have accounted for an additional portion of the 2008 decline. The point of this discussion is that, without a proper statistical analysis of all factors affecting slot revenue over the period, any conclusion regarding reasons for the decline in slot revenue are inconclusive. It is, however a fact that slot revenue declined in 2007 and 2008.

With respect to the IG Report's computation of the 14% increase in total revenue in 2008, table games revenue of \$5,067,305 in 2007, as reported by the West Virginia Lottery, was not included. Using the numbers in the IG Report, if total revenue for 2008 is compared to total revenue for 2007, including 2007 table games revenue and adjusted for inflation, the increase in revenue is 7.98%. This figure adds the additional 2008 revenue from table games netted against the decline in slot revenue. The increase in total revenue is near this report's computation of a 6.6% increase for Mountaineer as shown in Table 2.

The IG Report's computes an incremental impact of 2008 table revenue as a percent of 2007 slot revenue. The Report's computation of change in total (slot plus table) revenue gives the actual incremental impact, netting the increase in table games revenue against the decline in slot revenue.

²⁷ For example in FY07, according to Iowa Racing and Gaming Commission data, Prairie Meadows had 55 tables and 1,682 slots and Bluffs Run (Horseshoe) had 65 tables and 1,868 slots.

²⁸ The U.S. Department of Labor, Bureau of Labor Statistics, reports the consumer price index (1982-84=100), the basis of the inflation rate computation, as 201.6 in 2006, 207.3 in 2007, and 215.3 in 2008.

Discussion Summary

The ad hoc comparisons presented in the IG Report do not prove that table games result in an increase in slot machine revenue. Only a statistical analysis over a sufficient period of time can untangle the effects of table games from other events occurring over the period. Earlier in this report, two statistical analyses of changes in slot machine wagering were cited. One report analyzed slot machine wagering at Prairie Meadows, and the other analyzed slot machine wagering at 24 riverboat and three racinos in the Midwest. The introduction and growth of table games was found to have resulted in an 8%-13% reduction in slot machine wagering. The results of statistical analyses such as these are the most accurate way to isolate the effect of table games on slot machine wagering from changes in other factors affecting wagering over a sufficiently long estimation period.

2. Estimated Effect of Table Games on Pennsylvania Gaming Revenue

The IG Report estimates that the introduction of table games at the licensed Pennsylvania gaming facilities will result in an increase in total (slot machine plus table game) revenue.

Discussion.

We do not dispute this finding. However, as mentioned earlier, we have found that table games negatively affect slot machine revenue. Therefore, we expect that table games revenue will most likely more than offset the reduction in slot machine revenue. To the extent that this potential reduction in slot machine revenue from the addition of table games is not considered, the IG Report's estimates of added revenue from table games will be overstated.

3. Effective Tax Rate Comparisons

The IG Report has a table comparing effective tax rates in various U.S. gaming states where gaming facilities are permitted to have both slot machine and table games. The conclusion based on this table is that Pennsylvania is one of the highest effective tax rate states of those offering both table and slot machine gaming. The effective 55% slot machine tax rate combined with an assumed 12% table games tax rate is computed to be 46.1%. The 55% slot machine rate assumes that all licensed casinos are operational.

Discussion.

While we do not dispute that Pennsylvania is a relatively high gaming tax state, by restricting comparisons to states with slot machine and table gaming, the IG Report leaves out comparisons to other slot machine-only racino states. The effective tax rate on Pennsylvania slot machine revenues is overstated for the following two reasons:

1. Payments to the PRHDF for purses, breeder awards, and horsemen's welfare are not payments to a government agency for taxes or other uses, just as payments from gaming revenues to the racino operator are not payments to government. For this

reason, the reported Pennsylvania slot machine gaming tax rate should have excluded the current effective maximum 10.9% (gross before deductions) payment to the PRHDF.

As correctly pointed out in footnote 2 of the IG Report, and in our report, the expected maximum payment to the PRHDF per facility will be reduced for all facilities as standalone properties open. This will increase the gaming licensee's residual share of gaming revenue.

2. According to statute, gross gaming revenue is computed after deduction of promotional plays. This deduction was 8.9% of gross gaming revenue in calendar year 2008.

Using adjustments given in 1. and 2. above, the effective payment to government (state tax, local share assessment fund, economic development and tourism fund) from slot machine revenue should be 39.2% not 55% as given in the IG Report.

Table 4 in this report gives effective payments to government for gaming states, expanded to include slot machine racino states. Pennsylvania still had a relatively high effective tax rate at 39.2% in 2008 but ranked below five other racino states including Florida, Rhode Island and neighboring states of Delaware, New York and West Virginia.

4. Assumption of a 12% State Tax.

One of the assumptions in the IG Report is that of a 12% state tax on table games revenue. As in the IG Report, SB 1033 provides for a 12% state tax with no distribution of table games revenue to other recipients.

Discussion

The consequences of decreasing the government's share of table games revenue has been discussed in this report. West Virginia is the only state for which information is available to examine the potential effect of levying a different tax rate on table games than on slot machines. In West Virginia, the state tax rate on table games is 29.5%.²⁹ The shares to government and to purses for the race horse industry from table game revenue are much lower than their corresponding shares from slot machine revenues while the share to the racino operator is much higher. It was shown in this report that when slot machine revenue at Mountaineer decreased, even counting for the offsetting effect of table game revenue, government and the race horse industry lost a significant amount of revenue while the racino operator's revenues increased.

²⁹ Payments to government are computed after subtraction from the 35% state tax of statutorily specified payments of 2.5% purses and 2% to breeder awards for the West Virginia race horse industry and another 1% for racetrack employee pensions

5. Tax Rate Equalization

The IG Report presents reasons for a lower table games tax rate based on assumed increased operating and capital costs for table games relative to slot machines.

Discussion

Table Games Expenses

In the IG Report, the discussion of operating and capital expenditure requirements for table games is general without specific numeric examples of difference in these costs for table game and slot machine operations. The discussion mentions the requirement of significant capital costs for space requirements and associated amenities for table games customers. Of course, the same can be said for capital outlays for slot machine facilities. Significant capital outlays have already been made for slot machine facilities and accompanying amenities in Pennsylvania. If slot machines were to be increased from existing levels to the currently allotted 5,000 machines at existing Category 1 and 2 facilities, there would also be a need for significant capital outlays if gaming floor expansion were required. With the addition of table games, taxed at a much lower rate, it may be that table games would now be more likely to occupy space originally planned for slot machines, therefore reducing anticipated payments from slot machine revenues to government and other recipients.

Table Game Revenues

While there will be expenses associated with adding table games to the slot machines currently available at Pennsylvania gaming facilities, the return on investment associated with those costs is not discussed in the IG Report.

Using information reported in the 2008 Mountaineer Gaming Group, Inc. (MTR) 10-K Annual Report, average daily win per table game position at Mountaineer was twice that of average daily slot machine win. MTR's 10-K also attributes table gaming to increases in food, beverage and lodging revenue.

Table Game Profits

The racino operator will compare the additional costs associated with adding table games to the current slot machine gaming floor with additional costs to determine if it is profitable to have table games and, if so, the appropriate mix between table games and slot machines. Applying a different tax rate to table games and slot machines introduces a non-customer-determined component to the after-tax allocation decision process different from the customer-driven neutral after-tax decisions made by all other U.S. casinos.

Summary and Conclusions

An expressed intent of Act 71 of 2004 was to enhance horse racing and breeding in the State. In a report, “The Economic Impact of Slot Machines on Pennsylvania’s Pari-Mutuel Wagering Industry: Benchmarking the Industry, 2006, 2007, 2008”, the Pennsylvania Gaming Control Board reported findings that indicated the success of Act 71 in accomplishing its intent.

Competition from neighboring states is ramping up. Slot-machine gaming has been approved in Maryland and Ohio. In existing border gaming states, a slot-racino is being considered for Aqueduct and table games have been approved in Delaware. A local referendum for table games may be under consideration for the Charles Town, WV racino.

Table games are currently being considered as an addition to the existing product line of slot machines at Pennsylvania gaming facilities. There is a limited literature on the effect of adding table games to an existing slot machine gaming floor. Statistical studies have shown that the addition of table games will result in a decrease in slot machine wagering and as a consequence, slot machine revenue. It has also been found that adding table games increases overall gaming revenue and non-gaming revenue such as from food, beverage and lodging.

However, changing the relative shares from table games and slot machine revenue to recipients results in the creation of unintended winners and losers when slot revenue decreases. An example was given using data from Mountaineer racino in West Virginia showing the consequences of changing relative revenue shares from table games versus those from slot machines. The revenue shares to government and purses for horsemen from table games in West Virginia are much lower than those from slot machines. Consequently the residual share which accrues to the racetrack operator is much higher. As a result when slot machine revenue declined from the introduction of table games and/or competition from Pennsylvania racinos at Mountaineer, both the government and horsemen lost revenue even after the addition of table games revenue. Conversely, the racino operator gained revenue. The Mountaineer example points out that allocating different revenue shares from tables and slots to revenue recipients may result in the creation of unintended winners and losers when slot revenue decreases. This may occur whether the loss in slot revenue is from table games, competition, or other factors (ex. economic conditions).

Revenue shares from table games, as currently proposed in HB 21 and SB 1033, will be different than corresponding shares from slot machines. The shares of table game revenue to state and local governments are reduced (HB 21) or eliminated (SB 1033) and revenue to the economic development fund and the race horse industry are eliminated. The residual share retained by the operator is correspondingly increased. As shown in the Mountaineer example, the differences in allocation of revenue shares to recipients from slot machines and table games may result in the creation of unintended winners and losers.

Increasing the operator’s share of net income from table games relative to slot machines may cause the operator to disproportionately reduce slot machines relative to tables versus more market-based decisions based on revenue-neutral equal after-tax treatment of tables and slots.

To the extent that lower revenue shares to horse racing in the state result in less racing, current slot machine gaming revenues will be adversely affected since live racing has been found to increase slot handle.

A review of the Innovation Group's Report on the potential impact of the introduction of table games in Pennsylvania (IG Report) resulted in a number of findings. Among these were:

- Neither statistical nor conclusive ad hoc evidence was presented to support the claim that the introduction of table games results in an increase in slot machine revenue.
- The IG Report excludes slot-machine gaming states from its comparative effective tax rate table and uses a 55% effective gaming tax rate for Pennsylvania. This rate includes payments to the PRHDF which are not payments to government. The effective rate does not take into account the deduction of promotional payments of the gaming licensees from gross gaming revenues. Making these adjustments for comparison to the other racino states with which it competes, the effective 2008 calendar year tax rate was 39.2%.
- The IG Report assumes a 12% table games tax rate, after deduction of promotional play. SB 1033 also specifies a 12% table games rate and does not provide for payments to other revenue recipients. Such redistribution of recipient shares from tables and slots may result in unintended winners and losers.
- The IG Report discusses, in general terms, capital and operating expenses for table games but provides no quantitative information on these costs.
- The IG Report does not discuss table games revenue which have been found to be higher per position than that of slot machine revenue. The profitability and feasibility of table games depends on after-tax considerations of *both* revenues and expenses. This study did not specifically address the issue of table games profit.

There is a point at which gaming taxes may stifle investment required for racinos/casinos to be competitive with gaming venues in competing gaming states. A comparison with overall effective payments to government in other gaming states was made and Pennsylvania ranked below five other gaming states. With respect to payments to government from table games, Pennsylvania ranked in the lower tier of slot-table game states under both HB 21 and SB 1033

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U.S. Trotting Association

West Virginia Lottery

West Virginia Racing Commission

Appendix 1: Thoroughbred Purses by State (Top 50 Out of 82 with 10 or more days of racing), 2008

Ave. Daily Purse Rank	Track	State	Days	Total Purse	Ave. Daily Purse	Racino
1	Saratoga	NY	36	\$28,458,468	\$790,513	
2	Keeneland	KY	33	\$20,896,353	\$633,223	
3	Belmont	NY	95	\$53,516,302	\$563,329	
4	Del Mar	CA	43	\$22,260,154	\$517,678	
5	Santa Anita Park	CA	77	\$38,486,063	\$499,819	
6	Oak Tree at Santa Anita	CA	23	\$10,327,851	\$449,037	
7	Churchill Downs	KY	78	\$32,779,474	\$420,250	
8	Hollywood Park	CA	100	\$40,688,460	\$406,885	
9	Aqueduct	NY	119	\$44,380,455	\$372,945	
10	Fair Grounds	LA	82	\$28,511,482	\$347,701	*
11	Monmouth Park	NJ	100	\$34,619,100	\$346,191	**
12	Gulfstream Park	FL	89	\$28,242,014	\$317,326	*
13	Philadelphia Park#	PA	214	\$63,373,900	\$296,140	*
14	Fairplex Fair	CA	16	\$4,582,768	\$286,423	
15	Oaklawn Park	AR	53	\$14,775,976	\$278,792	*
16	Pimlico	MD	31	\$8,473,726	\$273,346	
17	Arlington Park	IL	96	\$26,110,368	\$271,983	
18	Meadowlands	NJ	41	\$10,852,085	\$264,685	**
19	Delaware Park	DE	136	\$32,785,792	\$241,072	*
20	Kentucky Downs	KY	6	\$1,349,550	\$224,925	
21	Presque Isle Downs	PA	101	\$22,357,057	\$221,357	*
22	Delta Downs	LA	88	\$19,436,208	\$220,866	*
23	Evangeline Downs	LA	84	\$17,868,228	\$212,717	*
24	Remington Park	OK	67	\$14,026,919	\$209,357	*
25	Colonial Downs	VA	47	\$9,502,460	\$202,180	
26	Louisiana Downs	LA	85	\$17,085,255	\$201,003	*
27	Calder Race Course	FL	160	\$30,255,840	\$189,099	
28	Hawthorne	IL	111	\$20,863,005	\$187,955	
29	Laurel Park	MD	124	\$23,199,791	\$187,095	
30	Lone Star Park	TX	65	\$12,046,515	\$185,331	
31	Sunland Park	NM	75	\$13,194,675	\$175,929	*
32	Prairie Meadows	IA	90	\$15,771,690	\$175,241	*
33	Charles Town	WV	225	\$39,313,800	\$174,728	*
34	Tampa Bay Downs	FL	94	\$15,715,954	\$167,191	
35	Golden Gate Fields	CA	127	\$20,014,057	\$157,591	
36	Bay Meadows	CA	70	\$10,862,110	\$155,173	
37	Zia Park	NM	53	\$8,076,829	\$152,393	*
38	Santa Rosa Fair	CA	12	\$1,747,188	\$145,599	
39	Mountaineer Park	WV	215	\$30,862,390	\$143,546	*
40	Hoosier Park	IN	63	\$8,935,920	\$141,840	
41	Pleasanton Fair	CA	11	\$1,525,403	\$138,673	
42	Turfway Park	KY	105	\$14,237,370	\$135,594	
43	Bay Meadows Fair	CA	10	\$1,351,160	\$135,116	
44	Ellis Park	KY	39	\$5,235,165	\$134,235	
45	Atlantic City	NJ	6	\$799,698	\$133,283	
46	Penn National	PA	178	\$23,397,388	\$131,446	*
47	Canterbury Park	MN	67	\$8,439,923	\$125,969	
48	Solano Fair	CA	11	\$1,292,412	\$117,492	
49	Finger Lakes	NY	157	\$18,352,358	\$116,894	*
50	Sam Houston	TX	44	\$5,126,484	\$116,511	

*slot racino, **purse supplement from casinos. #source: Pennsylvania Thoroughbred Horsemen's Association.

Source: Evan I. Hammonds, "Pressure Drop", The Blood Horse, March 7, 2009, 894-896.

Appendix 2: Harness Purses by State (tracks with 10 or more race days), 2008

Ave. Daily Purse Rank	Track	State	Days	Total purses	Ave. Daily Purse	Racino
1	Red Mile	KY	35	\$13,616,275	\$389,036	
2	Meadowlands	NJ	149	\$53,546,706	\$359,374	**
3	Chester	PA	151	\$41,597,865	\$275,483	*
4	Dover Downs	DE	134	\$29,348,153	\$219,016	*
5	Pocono Downs	PA	95	\$17,109,369	\$180,099	*
6	Yonkers Raceway	NY	253	\$45,185,988	\$178,601	*
7	Meadows	PA	208	\$34,380,356	\$165,290	*
8	Harrington	DE	109	\$17,124,581	\$157,106	*
9	Tioga Downs	NY	59	\$7,493,219	\$127,004	*
10	Indiana Downs	IN	80	\$9,065,779	\$113,322	*
11	Hoosier Park	IN	71	\$7,396,616	\$104,178	*
12	Balmoral Park	IL	176	\$16,491,738	\$93,703	
13	Hawthorne Park	IL	39	\$3,594,785	\$92,174	
14	Saratoga Raceway	NY	169	\$14,266,124	\$84,415	*
15	Freehold	NJ	191	\$14,846,488	\$77,730	
16	Maywood	IL	88	\$6,516,865	\$74,055	
17	Pompano Park	FL	160	\$11,673,833	\$72,961	*
18	Hazel Park	MI	92	\$6,548,759	\$71,182	
19	Batavia	NY	60	\$4,168,838	\$69,481	*
20	Vernon Downs	NY	90	\$5,912,475	\$65,694	*
21	Buffalo Raceway	NY	84	\$5,131,802	\$61,093	*
22	Colonial Downs	VA	34	\$2,018,039	\$59,354	
23	Rockingham	NH	55	\$2,820,023	\$51,273	
24	Scioto Downs	OH	68	\$3,481,547	\$51,199	
25	Monticello Raceway	NY	223	\$10,951,165	\$49,108	*
26	Cal Expo	CA	142	\$6,853,684	\$48,265	
27	Northville	MI	88	\$4,015,118	\$45,626	
28	Rosecroft	MD	49	\$2,202,429	\$44,948	
29	Northfield	OH	209	\$9,243,746	\$44,228	
30	Scarborough	ME	125	\$4,315,353	\$34,523	
31	Prairie Meadows	IA	18	\$616,600	\$34,256	*
32	Lebanon	OH	62	\$1,914,158	\$30,874	
33	Bangor	ME	54	\$1,643,735	\$30,440	*
34	Plainridge Racecourse	MA	100	\$2,931,098	\$29,311	
35	Jackson Raceway	MI	31	\$865,548	\$27,921	
36	Ocean Downs	MD	40	\$1,078,070	\$26,952	
37	Raceway Park	OH	77	\$1,952,224	\$25,354	
38	Sports Creek	MI	66	\$1,322,768	\$20,042	
39	Running Aces	MN	53	\$1,048,203	\$19,777	
40	Bluegrass Downs	KY	17	\$283,481	\$16,675	
41	Thunder Ridge	KY	24	\$264,160	\$11,007	

*slot racino, **purse supplement from casinos
 Note: Included tracks had 10 or more race days in 2008. Canadian tracks not included.
 Source: U.S. Trotting Association

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Richard Thalheimer has been involved in many areas of business and economic research for over 30 years and has a variety of both academic and trade journal publications. Dr. Thalheimer has an undergraduate degree in Metallurgy, a Masters degree in Business Administration, and a Masters and Ph.D. in economics. Before starting his business and academic career, he worked in the Kentucky Revenue Cabinet for eight years and was Executive Director of the Office of Revenue Estimating and Economic Analysis. He is president of Thalheimer Research Associates, Inc. (TRA, Inc.) an economic research and consulting firm in Lexington, Kentucky, founded in 1983. Along with his consulting firm position, Dr. Thalheimer was a Professor in the Department of Equine Business at the University of Louisville from 1989 through 2006. Courses taught there included equine marketing, equine financial management, current equine issues and the economics of racing and other forms of gaming, including lottery and casino gaming. Dr. Thalheimer has consulted with, and generated economic research reports for, many entities in the racing and gaming industries, other industries, and local, state and national governments. His areas of specialization are primarily the economics of the race horse industry, the casino gaming industry and the racino (casino gaming and racing at a single facility) gaming industry. He has provided expert testimony before various racing and gaming commissions and in court cases across the country. Internationally, Thalheimer Research Associates has conducted economic analyses of the parimutuel wagering industries in South Africa, Singapore and Norway. Dr. Thalheimer has been an invited speaker at the AEP/EAP Conference (European Association of Parimutuel Totalisator Managers) in Copenhagen, Denmark and in Stockholm, Sweden. He has been a subcontractor (with William Eadington, University of Nevada, Reno) with the Swiss Institute of Comparative Law for the economic portion of a report investigating the effect of barriers to gaming in the EU.

Dr. Thalheimer has presented results of his research in the equine and gaming industries at many conferences both in the U.S. and at international locations. Results of his research have been widely published in racing and gaming industry publications such as the Thoroughbred Times, The Blood Horse, International Gaming and Wagering Business and Global Gaming Business. His works have also been published in academic journals such as Applied Economics, Contemporary Economic Policy, Economic Inquiry, Journal of Economics and Business, Journal of Regional Science and Urban Economics, Journal of Forecasting, Management Science, the Southern Economic Journal, and the Journal of Agricultural and Applied Economics.